BIOLOGICAL TECHNICAL REPORT
FOR
CROCKER TENTATIVE PARCEL MAP
TPM 20743

ER 03-14-028
~~ER 03-14-0757~~

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1.0 SUMMARY OF FINDINGS

The proposed project is a minor subdivision and residential development of 4.33 gross acres into two parcels. The two parcels have gross sizes of 2.18 and 2.15 acres. There is an existing residence on the proposed 2.18 acre parcel. The proposed project also includes biological open space easements totaling 0.76 acres. The project is located in the Community of Alpine in East San Diego County, south of Interstate 8. The proposed project is located within the USGS 7.5' Alpine quad, Township 15 South, Range 2 East, Section 31. The proposed project is located within the Metro-Lakeside-Jamul portion of the Multiple Species Conservation Program (MSCP).

This report provides information regarding existing conditions, compliance with the Biological Mitigation Ordinance (BMO), Resource Protection Ordinance (RPO) and performs an impact analysis based on the current site design. This report also identifies mitigation measures that conform with the Biological Mitigation Ordinance and Resource Protection Ordinance therefore reducing any impacts to below a level of significance.

General biological surveys and sensitive plant surveys were performed onsite. The biological resources on-site include three habitat types as defined by the County: Englemann oak woodland, southern mixed chaparral, non-vegetated channel, disturbed, and developed habitat. Biological resources that are afforded some level of protection under the Biological Mitigation Ordinance would include the Englemann oak woodland, non-vegetated channel and southern mixed chaparral. The site does not qualify as a Biological Core Resource Area (BRCA) in accordance with the BMO.

No state or federally listed plant or animal species were observed on-site. Two sensitive plant species, Engelmann Oak (*Quercus engelmannii*) and Palmer's sagewort (*Artemisia palmeri*), were observed onsite. Both species are County list D species. No Engelmann oaks or Palmer's sagewort are proposed to be removed as a result of the proposed project. Two sensitive wildlife species, the San Diego horned lizard (*Phrynosoma coronatum blainvillei*) and the turkey vulture (*Cathartes aura*) were observed onsite.

Impacts to approximately 0.41 acres of granitic southern mixed chaparral will occur as a result of the proposed project. All impacts would be fully mitigated in accordance with the Biological Mitigation Ordinance. Mitigation for impacts to 0.41 acres of southern mixed chaparral will be achieved through the on-site conservation of 0.32 acres of southern mixed chaparral and the off-site acquisition of 0.09 acres of Tier III or higher habitat.. Potential impacts to sensitive animal species observed and with a high and moderate potential to occur onsite will be mitigated by the habitat based mitigation in accordance with the BMO. Implementation of these mitigation measures will reduce impacts to below a level of significance.

2.0 INTRODUCTION

The proposed project is a minor subdivision and residential development of 4.33 gross acres into two parcels. The two parcels have gross sizes ranging of 2.18 and 2.15 acres. The proposed project also includes open space easement totaling 0.76 acres. The proposed project is for residential land use. One of the parcels has an existing single-family residence, which is occupied by the current owners. As part of the project, residential development including one building pad, driveway, and utilities would be graded and excavated.

The 4.33-acre project area is located in the eastern portion San Diego County within the Community of Alpine in the County of San Diego (Figure 1). It is located east of the City of El Cajon, north of Highway 94, and south of Interstate 8. The proposed subdivision is located just east of Harbison Canyon Road on Galloway Valley Court, which is a private side road off of Galloway Valley Road. The project is located in the northeast quarter of Section 31 in Township 15 South, Range 2 East, Section 31 of the USGS Alpine 7.5' Quad. The project is limited to the 4.33- acre proposed project area and includes only a small area off-site improvements in an existing cul-de-sac at the western end of the project. The project area is shown on the Viejas Mountain USGS 7.5' Quadrangle (Figure 2) and it is located within the Metro-Lakeside-Jamul portion of the Multiple Species Conservation Program (MSCP). The site does not qualify as a Biological Resource Core Area (BRCA) in accordance with the Biological Mitigation Ordinance (BMO).

Topography, Soils, Land Use

The project area is located in the eastern portion of San Diego County within the foothills and interior valleys of the region. The property includes moderate slopes and two drainages. The project area is located on the eastern side of Harbison Canyon. Elevations range from 1285 to 1425 feet above mean sea level (MSL).

The soils on the property include Fallbrook rocky sandy loam 9 to 30 percent slopes, eroded. This soil is 20 to 30 inches deep over rock. Rock outcrops cover 10 percent of the surface (Bowman 1973).

Two seasonal drainages pass though the project area. Harbison Canyon and its associated creek, located approximately 1/2 mile to the west, are a major source of water and riparian resources in the area.

A large portion of the project is already developed. There is an occupied home onsite, outbuildings, water tank, driveways, and landscaping. The remainder is either disturbed, or supports three native habitats.

Regional Setting

The proposed project is located within the Metro-Lakeside-Jamul portion of the Multiple Species Conservation Program (MSCP). The site is located in area of rural residential interspersed with undeveloped lands.

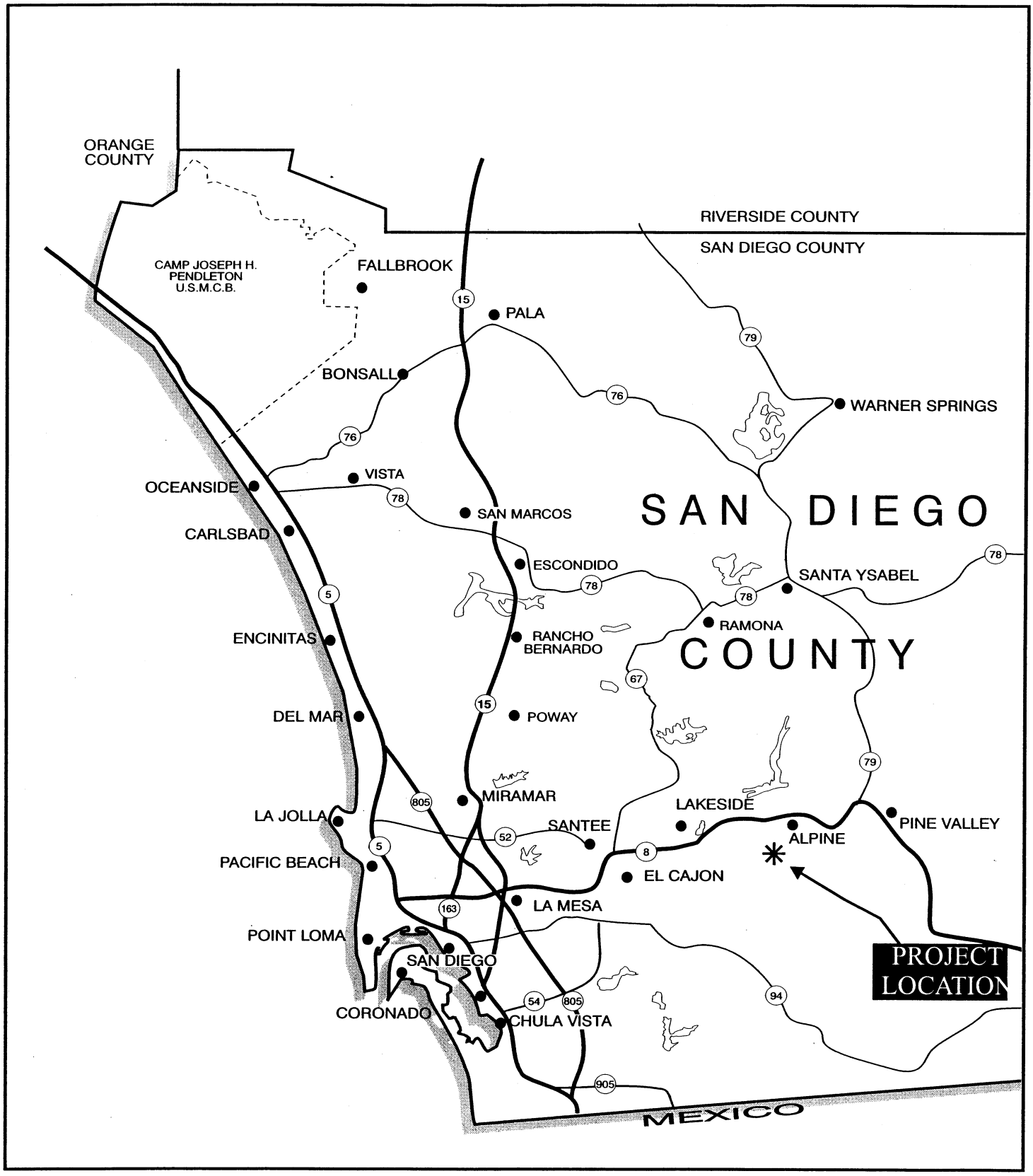
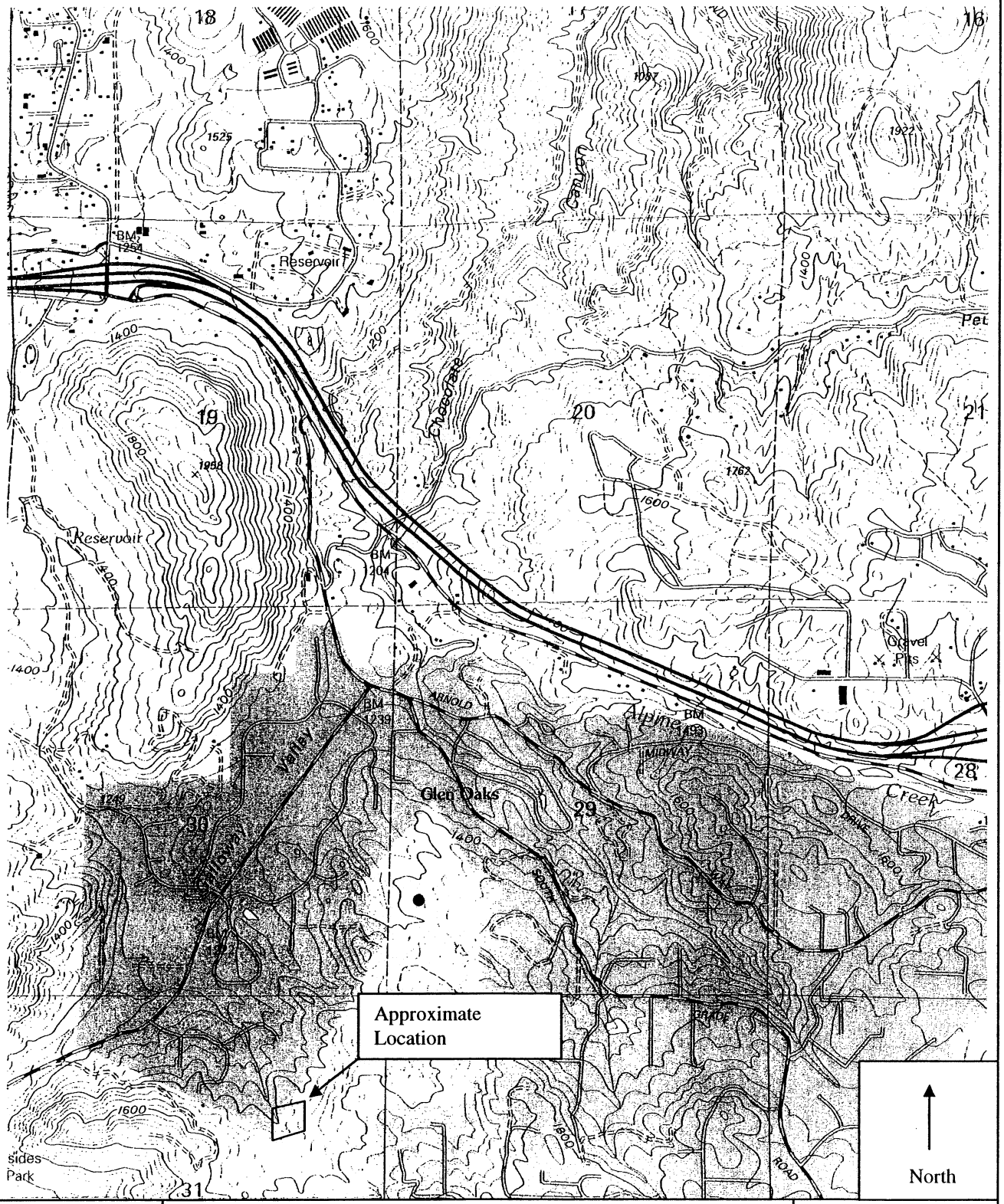


Figure 1
Regional Location Map



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VICINITY MAP
Crocker Property - TPM 20743

USGS Alpine 7.5' Quad

1"=2000'

Figure 2

3.0 SURVEY METHODOLOGY

The site was surveyed on foot and habitat mapped (Figure 3). Mapping was performed following the Biological Resources Mapping Requirements (County 2002). Wildlife species were identified directly by sight or by vocalizations, and indirectly by scat, tracks, or burrows. Field notes were maintained throughout the surveys and species of interest were mapped. Surveys focused on sensitive plant and wildlife species and all species observed were noted. The presence or absence of suitable habitat for sensitive species was also identified. The primary focus of the survey was to document and map the size, location, and general quality of all habitat types and the presence or potential presence of any sensitive resources (plant or wildlife) on-site. Surveys performed are listed in Table 1, below.

Table 1
Surveys performed on the Crocker Property (TPM 20743)

Date	Time	Survey	Temperature (°F)	Sky	Wind (mph)	Observers
5/6/04	3:08-5:11	Wildlife an plant survey	88°-89°	Clear	6-10	JH
5/28/04	11:50-3:10	General/ Vegetation mapping	70°-73°	100% Cover	0-3	JH
6/4/04	8:45-10:00	General/ Vegetation mapping	66°-68°	Clear	0-3	RC
3/2/05	11:30-12:30	Vegetation Mapping	64°	Clear	0-3	NB

JH=Jane Higginson, RC= Robin Church, NB= Nicole Bailey

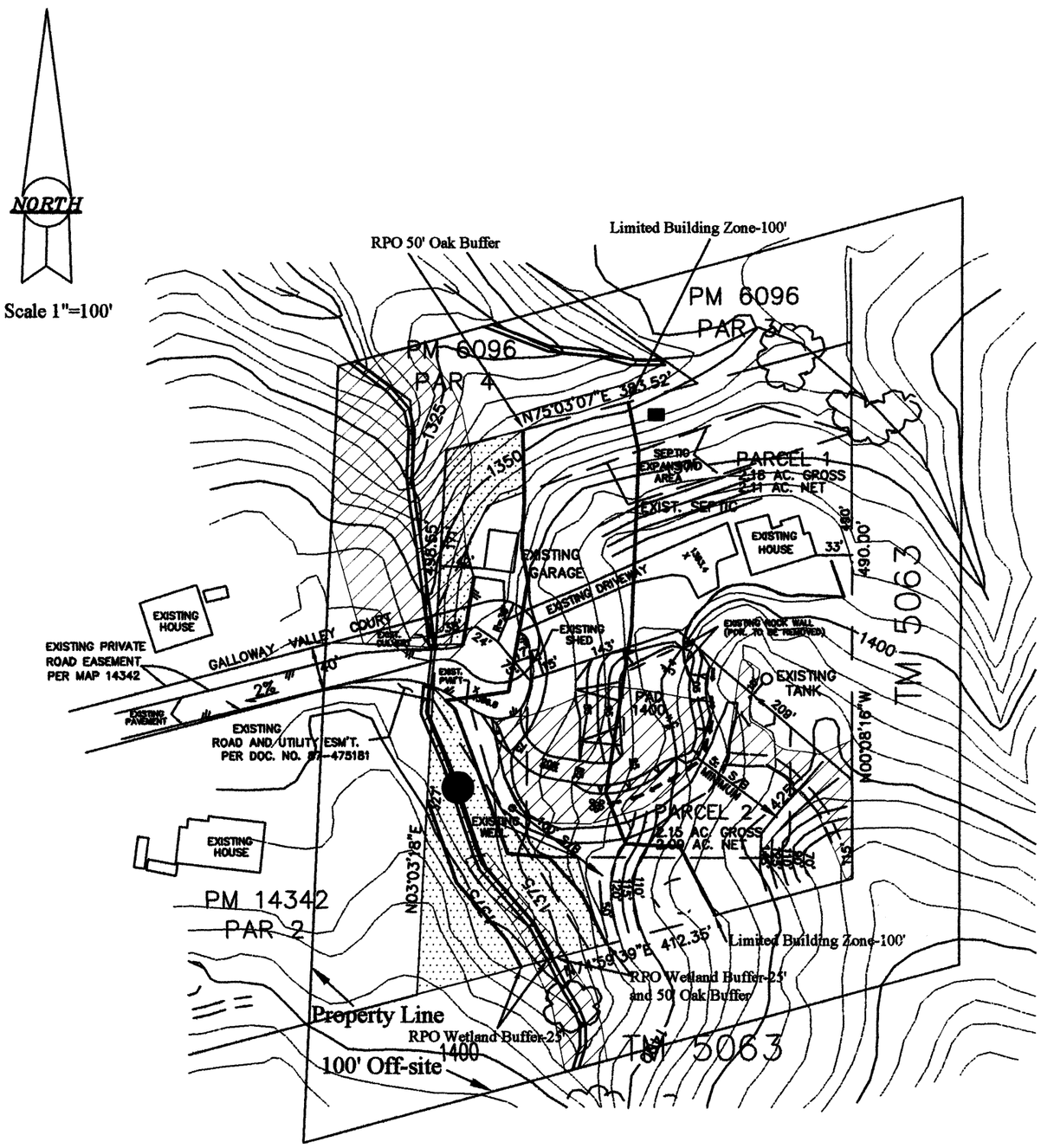
Nomenclature for this report conforms to Hickman (1993), for plants, Holland (1986) and Oberbauer (1996) for plant communities and habitat types, American Ornithological Union (AOU 1998 and 2000) for birds, Jennings (1983) and Stebbins (1985) for reptiles and amphibians, Jones (1992) for mammals, and Powell (1979) for insects.

4.0 RESULTS

The following discussion summarizes the existing biological resources on-site including habitats, vegetation and wildlife. Habitats are depicted on Figure 3.

4.1 Vegetation

Habitat descriptions are based on the County of San Diego's Biological Mapping Requirements (County 2002) and Terrestrial Vegetation Communities in San Diego County based in Holland's Descriptions (Oberbauer 1996), however, it has been shown that habitats on the project sites in San Diego County are often not pristine and rarely fit



Legend:

- Developed- 2.59 acres (Habitat Code: 12000)
- Non-Vegetated Channel, Floodway, Lakeshore Fringe - 0.02 acres (Habitat Code: 13200)
- Proposed Open Space Easement -0.76 acres
- Engelmann Oak Woodland - 0.16 acres (Habitat Code: 71180)
- Resource Protection Ordinance Wetlands
- Southern Mixed Chaparral - 0.99 acres (Habitat Code: 37120)
- Palmer's sagewort (*Artemisia palmeri*)
- Disturbed - 0.57 acres (Habitat Code: 11300)
- San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*)

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Biological Resources Map
Crocker Property - TPM 20743

Figure 3

into one description. Therefore the best-fit definition based on the County's current descriptions and dominant plant species has been applied. Five habitat types occur within the project site, Englemann oak woodland, southern mixed chaparral, unvegetated channel, disturbed, and developed. The vegetation habitats are depicted in Figure 3. A complete list of plant species observed on-site is included in Appendix A.

Un-Vegetated Channel 13200

The unvegetated channel covers approximately 0.02 acres of the site. It was burned in the Cedar fire, and it is currently regenerating. It consists of a few arroyo willow (*Salix lasiolepsis*), scrub oak (*Quercus berberidifolia*), and poison oak (*Toxicodendron diversilobum*). A large portion of the streambed within this habitat consists of unvegetated sandy channel and is surrounded by southern mixed chaparral.

Engelmann Oak Woodland (Habitat Code 71180)

Dense Engelmann oak woodland covers approximately 0.16 acres of the site. It consists of a canopy of Englemann oak (*Quercus engelmannii*), coast live oak (*Quercus agrifolia*) and sycamore (*Platanus racemosa*), with midstory of chaparral honeysuckle (*Lonicera subspicata*), scrub oak, elderberry (*Sambucus mexicanus*) and sawtooth goldenbush (*Hazardia squarrosa*).

Southern Mixed Chaparral (Habitat Code 37120)

Southern mixed chaparral covers approximately 0.99 acres of the site. This habitat consists of stands of a variety chaparral species; they are regenerating after having burned in the Cedar fire of fall, 2003. This chaparral is diversified further by many granitic rock outcroppings. Pre-fire habitat composition is difficult to conclusively determine. Currently, chamise (*Adenostoma fasciculatum*) and Ramona lilac (*Ceanothus tomentosa*) are dominant regenerating shrubs, but several other species are common: scrub oak, San Diego mountain-mahogany (*Cercocarpus minutiflorus*), woolly-leaved ceanothus, sugar bush (*Rhus ovata*), spiny red berry (*Rhamnus crocea*), and laurel sumac (*Malosma laurina*). Other species represented are dark-tipped bird's beak (*Cordylanthus rigidis*), our Lord's candle (*Yucca whipplei*), black mustard (*Brassica nigra*), California suncup (*Cammisonia bisorta*), white and yellow pincushion (*Chaenactis artemesiafolia and C. glabriuscula*), caterpillar phacelia (*Phacelia cicutaria*), and Parry's phacelia (*Phacelia parryi*).

Disturbed Habitat (Habitat Code: 11300)

Approximately 0.57 acres of disturbed habitat occurs onsite. It consists of segments of narrow dirt roads that pass through portions of the southern mixed chaparral habitat. It also consists of a partial pad in the location of the proposed new home pad, and formerly graded areas near the existing septic system and water tank. The majority of the disturbed habitat onsite is regrowing with invasive, non-native species that are being mowed by the owner. Vegetation in the disturbed habitat is represented by Bermuda buttercup (*Oxalis per-caprae*), wild oats (*Avena sp.*), black mustard, wild morning glory (*Calystegia macrostegia*), wild cucumber (*Marah macrocarpus*), chia (*Salvia*

columbariae), goosefoot (*Chenopodium sp.*), golden bowl mariposa (*Calochortus concolor*), and Russian thistle (*Salsola tragus*)

Developed (Habitat Code: 12000)

Approximately 2.59 acres of developed habitat occurs onsite in association with the already existing residence and the cul-de-sac of Galloway Valley Court. Landscaping plants occur within this area, such as red apple ice plant, palms, and fruit trees. On the north-east corner of the property, the previously identified RPO area is now a small drainage channel of rip-rap rock that is fed from a culvert on the east side under the new road being installed along the east side of the property and drains into another culvert that traverses under the northern neighbors property before draining into an RPO area to the north of the property. This is shown in figure 3. The rip-rap is believed to have been installed by the developer constructing the road.

Rock Outcrops

Rock outcrops are considered a unique microhabitat by the County. Numerous rock outcrops occur onsite, particularly in the steeper northern portions of the project. Rock outcrops add diversity to the vegetation communities by providing a discrete ecological niche for species not found elsewhere in the surrounding habitat. This niche includes shallow-soil spike-moss (*Selaginella* sp.) and lichen microhabitats. Rock outcrops also provide cover and potential nesting cavities for several wildlife species. Immediately adjacent to the Crocker property, a gray fox (*Urocyon cinereoargenteus*) was seen sleeping in a cavity among boulders. Some reptile species are attracted to the sun-warmed surfaces of the rocks, and birds use boulders as perches and vantage points.

4.2 Wildlife

A total of 39 wildlife species were identified onsite. These included nine invertebrate species, two reptile species, nineteen bird species, and ten mammal species. A complete list of wildlife species observed on-site is included as Appendix B.

The two reptile species observed onsite were the San Diego horned lizard (*Phrynosoma coronatum blainvillei*) and the western fence lizard (*Sceloporus occidentalis*), although others probably occur. Birds observed included common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), rufous-sided towhee (*Pipilo erythrophthalmus*), lesser goldfinch (*Carduelis psaltria*), rough-winged swallow (*Stelgidopteryx serripennis*), Costa'a hummingbird (*Calypte costae*), Anna'a hummingbird (*Calypte anna*), ash-throated flycatcher (*Myiarchus cinerascens*), mourning dove (*Zenaida macroura*), scrub jay (*Aphelocoma californica*), California twhee (*Pipilo crissalis*), bushtit (*Psaltriparus minimus*), and turkey vulture (*Cathartes aura*). Bird life was not as abundant or as diverse as would have been expected prior to the fire. Mammals detected onsite include coyote (*Canis latrans*), bobcat (*Lynx rufus*), California ground squirrel (*Spermophilus beecheyi nudipes*), raccoon (*Procyon lotor*), woodrat (*Neotoma sp.*), skunk (*Mephitis sp.*), and desert cottontail (*Sylilagus audubonii*). A gray fox (*Urocyon cinereoargentesus*) was

seen adjacent to the site, and the landowners have reported regularly observing a mountain lion (*Felis concolor*) on the slopes above the site before the fire.

4.3 Sensitive Resources

Sensitive or special interest plant and wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive habitats, as identified by these same groups, are those which generally support plant or wildlife species considered sensitive by these resource protection agencies or groups. Sensitive species and habitats are so called because of their limited distribution, restricted habitat requirements, particular susceptibility to human disturbance, degradation due to development or invasion by non-native species, or a combination of all of these factors.

In addition to RPO and the MSCP the following were used in the determination of sensitive biological resources: U.S. Fish and Wildlife Service (USFWS) (USFWS 2001); California Department of Fish and Game (CDFG) (CDFG 1999, 2000 and 2001); and California Native Plant Society (CNPS 2001). An explanation of the sensitivity codes used in this report are included in Appendix E.

Applicable Resource Conservation Plans and Ordinances

In San Diego County, regulations have been adopted which define and provide protection to certain types of sensitive biological resources as follows:

Resource Protection Ordinance (RPO)

The purpose of the RPO is to protect sensitive resources and prevent their degradation and loss. The sensitive resources protected by the RPO include wetlands, wetland buffer areas, and sensitive habitat lands, which are defined as follows:

> "Wetland" areas include lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are "wetlands":
>
> a) At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);
> b) The substratum is predominantly undrained hydric soil; or
> c) The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season of each year.

"Wetland buffer" areas include lands which provide a buffer area of an appropriate size to protect the environmental and functional habitat values of the wetland, or which are integrally important in supporting the full range of the wetland and adjacent upland biological community.

"Sensitive habitat lands" include those which support unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants, including the area which is necessary to support a viable population of any of these species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning corridor.

Multiple Species Conservation Program (MSCP) and Biological Mitigation Ordinance (BMO)

In response to the continued loss of sensitive biological resources, especially coastal sage scrub, the County adopted the MSCP in 1997. The proposed project must conform to the MSCP Subarea Plan, and the project must demonstrate that it has incorporated avoidance measures to meet the preserve design requirements of the Plan. To implement the MSCP Subarea Plan, the County enacted the BMO. Habitats are classified in different "Tier" levels that require different levels of mitigation. Application of the BMO to individual projects is the method by which the County will achieve the conservation goals set forth in the MSCP. Mitigation requirements for different habitat types are based on the location of both the impact and the proposed mitigation. Impacts within core habitat areas or pre-approved mitigation areas require higher mitigation ratios. Conversely, more credit is allowed for preservation or mitigation within core habitat areas or pre-approved mitigation areas.

4.3.1 Sensitive Habitats

Non-vegetated channel,Engelmann oak woodland, and southern mixed chaparral would be considered sensitive habitats in accordance with the Biological Mitigation Ordinance. Each of these are discussed below.

Non-vegetated Channel (Tier I)

The non-vegetated channel is considered to be a wetland habitat. Wetland habitats, in general, are considered sensitive biological resources because they have been dramatically reduced in San Diego County and across the nation. Due to the regional and national loss of wetland habitat, resource agencies have a "no net loss policy" for wetlands. Wetland habitat is important because it has high levels of food and nutrients, high wildlife diversity, and it is a valuable water source in the arid climate of Southern California. This habitat's sensitivity and its ultimate reduction is evidenced by the large number of declining bird species closely associated with, or dependent on this habitat type for reproduction and ultimate success. Agencies which consider wetland habitat sensitive include the County, ACOE, USFWS, CDFG, and the EPA. Wetland habitat protection is specifically addressed by the CDFG Code, Sections 1600-1606 (Streambed Alteration Agreement) and the ACOE's Section 404 permit process (Clean Water Act).

Dense Engelmann Oak Woodland (Tier I)

Oak woodlands in all forms are considered sensitive by the County of San Diego because of their limited distribution, their high wildlife value and their aesthetic value.

Southern Mixed Chaparral -- Granitic (Tier III)

Although still a relatively plentiful habitat, granitic southern mixed chaparral is considered a sensitive habitat within the BMO. This habitat is classified as Tier III habitat.

4.3.2 Sensitive Plants

Sensitive or special interest plant species are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive plant species are so called because of their limited distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive plant species include: County list of Sensitive Plant Species (2001), CDFG (1999) and the California Native Plant Society Electronic Inventory (CNPS 2001).

Sensitive plant surveys were performed during the general biological surveys. No rare, threatened, or endangered plant species were observed on-site. Two sensitive plant species, Engelmann oak (*Quercus engelmanni*) and San Diego sagewort (*Artemesia palmeri*) were observed onsite. These species are discussed below. Thirty-three sensitive plant species are known from the area. All of the species would have been observable during the surveys performed onsite. Chaparral rein orchid is not on the County list of sensitive plant species, however it is a CNPS sensitive plant species. Sensitive plant species with the potential to occur on-site are discussed in Appendix C.

Quercus engelmannii (Engelmann oak)

Quercus engelmannii, a semi-deciduous oak with a distinctive twisted growth pattern and bluish-green leaves, is a County list D and CNPS List 4 species (limited distribution) with a R-E-D ranking of 1-2-2. This species can occur in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland habitats; the center of its distribution is cismontane San Diego County. Engelmann oaks are sensitive to land management practices such as fire, and their small, disjunct woodlands are highly susceptible to extirpation. Individual trees typically live from 50 to 80 years; however, a few trees in every woodland may be over 150 years old. All of the *Q. engelmannii* oaks occur within the Engelmann oak woodland onsite (Figure 3).

Artemisia palmeri (Palmer's sagewort)

Artemisia palmeri is a drought deciduous shrub on County list D, and CNPS List 4 species (limited distribution) with a R-E-D ranking of 1-2-1. It can occur in chaparral, coastal sage scrub, riparian scrub, and riparian woodland usually preferring mesic sandy habitats within each of these communities. *Artemisia palmeri* occurs in San Diego County and northern Baja California. This species is sensitive to development and flood control projects. A small patch of this species with less than 20 individuals is present within the drainage (Figure 3).

4.3.3 Sensitive Animals

Sensitive or special interest wildlife species and habitats are those which are considered rare, threatened, or endangered within the state or region by local, state, or federal resource conservation agencies. Sensitive species are so called because of their limited distribution, restricted habitat requirements, or particular susceptibility to human disturbance, or a combination of these factors. Sources used for the determination of sensitive biological resources include: USFWS (USFWS 2001), CDFG (CDFG 2000 and 2001). Additional species receive federal protection under the Bald Eagle Protection Act and the Migratory Bird Treaty Act and Convention for the Protection of Migratory Birds and Animals.

The CDFG also lists species as threatened or endangered, or candidates for listing as threatened or endangered. Lower sensitivity animals may be listed as "species of special concern" (CDFG 2000). The CDFG further classifies some species under the following categories: "fully protected", "protected furbearer," "harvest species," "protected amphibian," and "protected reptile." The designation "protected" indicates that a species may to be taken or possessed except under special permit from the CDFG; "fully protected" indicates that a species can be taken only for scientific purposes. The designation "harvest species" indicates that take of the species is controlled by the state government.

No threatened or endangered animal species were observed on-site. Two sensitive animal species, the San Diego horned lizard (*Phrynosoma coronatum blainvillei*) and the turkey vulture (*Cathartes aura*), were observed onsite. These species are discussed below.

San Diego horned lizard (*Phrynosoma coronatum blainvillei*)

The San Diego horned lizard is a regional subspecies of the widespread coast horned lizard, classified as a federal Species of Concern. This spiny, wide-bodied lizard occurs primarily in coastal sage scrub communities. It was a common species in San Diego County until about 10 years ago (Hix 1990). Factors that have contributed to its decline include loss of habitat, over collecting, and the introduction of exotic ants. In some places, especially adjacent to urban areas, introduced ants have displaced native harvester ants (*Pogonomyrmex* spp.) upon which the lizard feeds exclusively. One individual was observed in the sandy soil in the drainage that cuts across the northern part of the Crocker property (Figure 3).

Turkey Vulture (*Cathartes aura*)

The turkey vulture is a County sensitive species. According to Unitt (1984), this species is a fairly common to common spring and fall migrant, uncommon to locally common winter visitor and rare to uncommon summer resident of San Diego County. One turkey vulture was seen flying overhead.Raptor Species

Due to declining habitat and the associated declining numbers of these species on the whole, raptor species, as a group, have been designated as California Species of Special Concern by the CDFG. Raptors are large predatory or scavenger birds that typically

require tall trees for perching and nesting, with adjacent open grasslands necessary for foraging. These species are protected, especially during their critical nesting and wintering stages. These raptors are protected under the CDFG California Raptor Protection Act (Title 14, Section 670). Five red-tailed hawks (*Buteo jamaicensis*), apparently two adults and their young of the year, were seen onsite flying over all of the habitats, and remaining in the general area.

Thirty-six sensitive species with the potential to occur onsite are discussed in Appendix D. Of the thirty-six sensitive species with the potential to occur onsite, sixteen have a high potential to occur onsite, and six have a moderate potential to occur. The species with a high potential to occur onsite include coastal rosy boa (*Charina trivirgata roseofusca*), coastal western whiptail (*Cnemidophorus tigris multiscultatus*), coast patch-nosed snake (*Salvadora hexaplexis virgultea*), northern red-diamond rattlesnake (*Crotalus ruber ruber*), Orange-throated whiptail (*Cnemidophorus hyperthyrus*), San Diego ringneck snake (*Diadophus punctatus similes*), silvery legless lizard (*Anniela pulchra pulchra*), Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), sharp-shinned hawk (*Accipiter striatus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), greater western mastiff bat (*Eumops perotis californicus*), mountain lion (*Felis concolor*), ringtail (*Bassariscus astutus*), southern grasshopper mouse (*Onychomys torridus ramona*), and southern mule deer (*Odocoileus heminonus*),

The species with a moderate potential to occur include western spadefoot toad (*Scaphiopus hammondii*), pallid bat (*Antrozous pallida*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), San Diego desert woodrat (*Neotoma lepida intermediata*), small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*).

All of these species with a high and moderate potential to occur onsite except the mountain lion and southern mule deer are federal and/or state species of concern. The mountain lion is a protected species by CDFG and a County sensitive species and the southern mule deer is also a County sensitive species. Three additional federally listed species, the arroyo southwestern toad (*Bufo micrposcaphus californicus*), the Quino checkerspot butterfy (*Euphydryas editha quino*), and the Califdornia gnatcatcher (Polioptila californica) have a low potential to occur onsite. Each of these species is discussed below.

California Gnatcatcher (*Polioptila californica*)

Status: Federally listed as Threatened, State Species of Concern

The California gnatcatcher (CAGN), a Federally Threatened species and California Species of Concern, is a small gray songbird that is a resident of scrub-dominated communities in southwestern California from the Los Angeles Basin through Baja California, Mexico. California gnatcatcher populations have declined due to extensive loss of Diegan coastal sage scrub habitat to urban and agricultural uses. This species has a low potential to occur onsite because Diegan coastal sage scrub habitat is not represented onsite, nor apparently, was this habitat present before the fire.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)

Status: Federally listed as Endangered.

The United States Fish and Wildlife Service (USFWS) officially listed the quino checkerspot butterfly as "endangered" on January 16, 1997 (USFWS 1997). For this reason the quino checkerspot is protected under the provisions of the Endangered Species Act of 1973, as amended. As such, "take" of this species, either directly or indirectly, is prohibited by law. In order to help land owners in preventing an unknowing "take" of this species, the USFWS has required that land owners have a protocol survey conducted on their land prior to project implementation in order to determine the presence or absence of this species.

The quino checkerspot butterfly is one of several subspecies of *Euphydryas editha.* It is a member of the brush-footed butterfly family (Nymphalidae). The quino checkerspot is associated with a variety of habitats which include clay soil meadows, grassland, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland and semi-desert (Ballmer, *et al.*, 2000). Despite association with a wide range of habitat, distribution of this species is restricted to areas which support the larval host plants. The quino's primary host plant is *Plantago erecta.* Other possible larval host plant species include *Plantago patagonica, Antirhinnum coulterianum, Castilleja exserta* and/or *Cordylanthus rigidus* (USFWS 2002) as well as *Collinsia* and possibly other Scrophulariaceae (Ballmer *et al.* 2000). Generally the flight season for the quino checkerspot occurs from late February through April, peaking in March or April. This species has a low potential to occur onsite. The surveys were performed at the wrong time of year to detect host plant. However, due to the high stump density, it appears that the southern mixed chaparral habitat would have been too dense for the quino checkerspot . In addition, the project site is far from currently known quino populations.

Arroyo Southwestern Toad (*Bufo micrposcaphus californicus*)

Status: Federally listed as Endangered, State Species of Special Concern

The arroyo southwestern toad was listed as federally endangered in December 1994. This species is a small toad (2 to 3 inches), light greenish gray or tan with warty skin and dark spots. This species is restricted to rivers that have shallow, gravelly pools adjacent to sandy terraces. Breeding occurs on large streams with persistent water from March to mid-June. Eggs are deposited and larvae develop in shallow pools with minimal current and little or no emergent vegetation and with sand or pea gravel substrate overlain with flocculent silt. After metamorphosis (June or July), the juvenile toads remain on the bordering gravel bars until the pool no longer persists. Juvenile and adults forage for insects on sandy stream terraces that have nearly complete closure of cottonwoods, oaks, or willows and almost no grass and herbaceous cover at ground level. Adult toads excavate shallow burrows on the terraces where they shelter during the day when the surface is damp or during longer intervals during the dry season. (Federal Register 1994) The drainages onsite are ephemeral, lack gravel bars and sandy terraces, and as a result do not provide suitable habitat for any of the life stages of the arroyo southwestern toad. There is a low potential for this species to occur onsite.

5.0 REGULATORY REQUIREMENTS PERTAINING TO WETLANDS

The limits of jurisdiction for each agency is also discussed below.

Army Corps of Engineers (ACOE) – Clean Water Act

Pursuant to Section 404 of the Clean Water Act, any on-site wetlands and waters of the U.S., would be subject to permit provisions regulating activities within their boundaries. These provisions are enforced by the ACOE, as well as the EPA, with technical input from the USFWS. Three factors are considered in the designation of wetlands: the presence of hydrophytic vegetation, hydric soils, and site hydrology. According to the latest ACOE methodology, all three wetland indicators must be present to make a jurisdictional ruling (Environmental Laboratory 1987). Areas indicated as wetlands by all three factors during the rainy season may lack the indicators of hydrology and/or vegetation during the dry season, or the vegetation may have been altered or removed through human disturbance. Such areas may still be regarded as wetlands by resource agencies.

In addition, the ACOE has jurisdiction over "waters of the United States". Waters of the United States are defined in 33 CFR part 328 (referred to as "waters"). The lateral limits of the jurisdiction of waters maybe divided into three categories, territorial seas, tidal waters and non-tidal waters. 33 CFR part 328.3 provides the definition of waters of the United States as follows:

(a) The term *waters of the United States* means

(1) All waters which are currently used, or were used in the past, or maybe susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are or could be used for industrial purpose by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in (a) (1) through (4) of this section;

(6) The territorial seas

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.

Waste treatment systems, including treatments of ponds or lagoons designed to meet the requirements if CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.

(8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding the CWA remains with the Environmental Protection Agency (EPA).

(b) The term *wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

(c) The term *adjacent* means bordering, contiguous or neighboring. Wetlands separated from other waters of the United States by man made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands."

(d) The term *high tide line* means the line of intersection of the land with the water's surface to the maximum height reached by a rising tide.....

(e) The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(f) The term *tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun....

The limits of jurisdiction in non-tidal waters is defined in 30 CFR part 328.4 (c). When non-tidal waters occur in the absence of adjacent wetlands, the jurisdiction extends to ordinary high water mark. Based on the above definition of waters of the United States and limits of jurisdiction, waters of the U.S. occur onsite. The limits of the waters of the U.S. onsite would be the same as the limits of the RPO wetland depicted in Figure 3.

California Department of Fish and Game – Streambed Alteration Program

The CDFG regulates wetlands under Section 1601/1603 of the California Fish and Game Code through their Streambed Alteration Agreement Program. Any alteration of any stream course within the State of California requires a Streambed Alteration Agreement from the CDFG. Section 1601 pertains to public projects where section1603 applies to private projects and specifically states: "It is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of

any river, stream or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity..."

A stream is defined by the California Code of Regulations (14 CCR 1.72) as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic wildlife. This includes watercourses having a surface or subsurface flow that supports or has supported riparian habitat.

The limits of CDFG jurisdiction are defined in the code (Section 1601/1603) as the bed, channel, or bank of any river, stream or lake designated by the department in which there is at any time existing fish or wildlife resource or from which these resources derive benefit ....

The drainages onsite qualify as CDFG jurisdictional wetlands. CDFG jurisdiction would extend to the top of bank.

County of San Diego Resource Protection Ordinance

The County of San Diego Resource Protection Ordinance defines wetlands under Article II, item 16. as: "All lands which are transitional between terrestrial and aquatic where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are 'wetlands":

a. At least periodically, the land supports predominately hydrophytes;
b. The substratum is predominantly undrained hydric soils; or
c. The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season each year.

Resource Protection Ordinance wetlands occur onsite. Their limits are the same as those outlined for ACOE waters of the U.S. and identified on Figure 3.

6.0 ANTICIPATED PROJECT IMPACTS

Impacts on biological resources can be categorized as either direct, indirect, or cumulative. Direct impacts are a result of project implementation, and generally include: the loss of vegetation and sensitive habitats and populations; the introduction of non-native species which may out-compete and displace native vegetation; activity-related to mortalities of wildlife; loss of foraging, nesting or burrowing habitat; destruction of breeding habitats; and fragmentation of wildlife corridors. Indirect impacts occur as a result of the increase in human encroachment in the natural environment and include: off-road vehicle use which impacts sensitive plant or animal species; harassment and or collection of wildlife species; intrusion and wildlife mortality by domestic pets in open space areas following residential development; increased noise and lighting; and inadvertent increased wildlife mortalities along roads. Cumulative impacts occur as a result of on-going direct and indirect impacts for unrelated or fragmented projects

overall. Cumulative impacts are assessed on a regional basis and determined the overall effect of numerous activities on a sensitive resource over a larger area.

Generally, there are three levels of adverse impacts associated with biological resources: significant, locally important, and not significant. The County of San Diego adopted the regional Multiple Species Conservation Program and Subarea Plan in 1997. To implement the Subarea Plan the County enacted the Biological Mitigation Ordinance. These documents identify biological resources and, indirectly, thresholds for significance. Habitats are classified in different tier levels which require different levels of mitigation. Habitats within Tiers I to III, require mitigation under the Biological Mitigation Ordinance and therefore are considered significant.

These levels of impacts were applied to the project site and are used below in the discussion of specific potential impacts. Figure 3 details the proposed impact areas and open space.

6.1 Proposed Project and Potential Impacts

The proposed project is a minor subdivision and residential development of 4.33 gross acres into two parcels. The two parcels have gross sizes of 2.18 and 2.15 acres. The proposed project also includes open space easements totaling 0.76 acres. The proposed project is for residential land use. As part of the project, residential development including a building pad, driveway, and utilities would be graded and excavated. Off-site improvements will include a slight alteration of the cul-de-sac at the end of Galloway Valley Court. The project is located within the Metro-Lakeside-Jamul portion of the MSCP. Table 2 identifies the potential impacts as a result of the proposed project as well as appropriate mitigation ratios.

Table 2
Habitat Acreages and Potential Impacts

Habitat	Total Acres	Direct Impacts (Grading and Fire Clearing)	Mitigation Ratio		On-site Conservation (acres)	Off-site Mitigation (acres)
Non-Vegetated Channel (Tier I)	0.02	0	NA		0.02*	NA
Dense Engelmann Oak Woodland (Tier I)	0.16	0	2:1		0.16**	NA
Granitic Southern Mixed Chaparral (Tier III)	0.99	0.41	1:1		0.58***	0.09
Disturbed Habitat (Tier IV)	0.57	0.57	NA		NA	NA
Developed Habitat (No Tier)	2.59	2.59	NA		NA	NA
Total	**4.33**	**3.57**			**0.76**	**0.15**

All 0.02 acres of the non-vegetated channel are associated with the RPO wetland and buffer so they can not be used toward mitigation credit. All 0.16 acres of the dense Engelmann oak woodland are associated with the RPO wetland and buffer so they can not be used toward mitigation credit. ***0.26 acres of the 0.58 acres of granitic southern mixed chaparral are associated with the RPO wetland and buffer so they can not be used toward mitigation credit. This leaves 0.32 acres of granitic southern mixed chaparral for mitigation credit.**

6.2 Significance Of Impacts

The following section discusses the significance of potential impacts to the resources onsite. Impacts will occur to southern mixed chaparral, disturbed and developed habitats. No impacts will occur to the southern arroyo willow riparian forest or Engelmann oak woodland.

Southern Mixed Chaparral - Granitic (Tier III)

Impacts will occur to approximately 0.41 acres of southern mixed chaparral onsite. This impact would be considered significant.

Disturbed Habitat (Tier IV)

Impacts to 0.57 acres of disturbed habitat would not be considered significant.

Developed Habitat (No Tier)

The developed portion of the site will continue to be used as it is currently being used. No significant impacts will occur.

Sensitive Plant Species

Two sensitive plant species were observed onsite, Engelmann Oak, and Palmer's sagewort. These are County List D Species. No impacts will occur to these species.

Sensitive Wildlife Species

Two sensitive wildlife species, the San Diego horned lizard and the turkey vulture, were observed onsite. Potential impacts to sensitive wildlife species observed and with a high and moderate potential to occur onsite would be considered significant.

7.0 PROPOSED MITIGATION

Under CEQA, mitigation is required for all significant biological impacts (i.e. impacts within highly constrained areas). In addition, the CDFG 1600 and the ACOE 404 permit process generally require mitigation for the loss of wetland resources. The following mitigation measures are recommendations to offset significant impacts. Recommendations are also given to offset locally important biological impacts. Although mitigation measures are not often required for locally important impacts, local jurisdictions often implement these measures to minimize cumulative impacts within the region.

According to Appendix G of the State CEQA guidelines, the proposed project would have a potentially significant impact to onsite biological resources if it would:

§ Have a substantial adverse affect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

§ Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

§ Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

§ Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

§ Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

§ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Resource Protection Ordinance

Under the RPO (discussed above), development of wetlands, wetland buffer areas, and sensitive habitat lands is restricted, as follows:

Within *wetlands*, the RPO restricts uses to aquaculture, scientific research, educational or recreational uses, or wetland restoration, and imposes further limitations which include, in particular, that grading, filling and construction is not permitted.

Within *wetland buffer areas*, the RPO allows uses permitted in wetland areas, plus access paths and other improvements necessary to protect adjacent wetlands.

Biological Mitigation Ordinance

The BMO requires that mitigation be provided, in accordance with ratios which take into account factors such as: (1) What "Tier" the impacted habitat falls into; (2) whether the impacted resources are located within a Biological Resources Core Area (BRCA) and (3) whether the mitigation land would be located onsite or offsite. As discussed in Section 2.0, Regional Setting, the project site does not qualify as a BRCA.

Under CEQA, mitigation is required for all significant biological impacts. Mitigation, per resource, is discussed below with corresponding level of significance after mitigation.

Southern Mixed Chaparral (Tier III)

Approximately 0.41 acres of this habitat will be impacted as a result of the proposed project. Mitigation for impacts to southern mixed chaparral are required at 1:1 ratio in conformance with the BMO. Mitigation for this impact will be the on-site conservation of 0.58 acres of southern mixed chaparral in open space and the acquisition of 0.09 acres of Tier III or higher habitat. Of the 0.58 acres of southern mixed chaparral in open space, 0.26 acres are associated with the RPO buffer that will not count toward mitigation credit. An additional 0.02 acres of unvegetated channel and 0.16 acres of Engelmann oak woodland are also included within the proposed open space. The proposed open space is contiguous with undeveloped lands to the south.

Sensitive Wildlife Species

Potential impacts to sensitive animal species observed and with a high and moderate potential to occur onsite will be mitigated by the habitat based mitigation in accordance with the BMO.

With implementation of the proposed mitigation measures, impacts to biological resources will be mitigated to below a level of significance.

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9.0 CERTIFICATION

This report has been prepared by Robin Church, County Certified Biologist.

APPENDIX A

PLANTS OBSERVED

APPENDIX A PLANT SPECIES OBSERVED ON THE CROCKER PROPERTY – TPM 20743			
Family Name	**Species Name♦**	**Common Name**	**Habitat**
AGAVACEAE	*Yucca whipplei*	Our Lord's candle	SMC
ANACARDIACEAE	*Malosma laurina*	Laurel sumac	SMC
	Rhus ovata	Sugar Bush	SMC
	Toxicodendron diversilobum	Poison oak	SAWRF
APIACEAE	*Conium maculatum??*	Poison hemlock	SAWRF
ASTERACEAE	*Artemesia palmeri**	Palmer's sagewort	SMC,SAWRF
	Centaurea sp.♦	Star thistle	DS,SAWRF
	Chaenactis artemesiafolia	White pincushion	SMC
	Chaenactis glabriuscula	Yellow pincushion	SMC
	Eriophyllum confertiflorum	Golden yarrow	DS
	Hazardia squarrosa	Sawtooth goldenbush	SMC, DEOW
	Sonchus sp.♦	Sow-thistle	DE,SAWRF
	Stephanomeria sp.	Wreath-plant	SMC,DS
BORAGINACEAE	*Amsinckia menziessii*	Fiddleneck	SMC
	Plagiobothrys sp.	Popcorn flower	SMC
BRASSICACEAE	*Brassica nigra♦*	Black mustard	SMC,DS,SAWRF
CAPRIFOLIACEAE	*Lonicera subspicata*	Chaparral honeysuckle	SMC,DEOW
	Sambucus mexicana	Blue elderberry	DEOW
CARYOPHYLLACEAE	*Silene laciniata*	Indian pink	SMC
CHENOPODIACEAE	*Chenopodium* sp.	Goosefoot	SMC,DS
	Salsola tragus♦	Russian thistle	DS,SAWRF
CONVULVULACEAE	*Calystegia macrostegia*	Wild morning glory	SMC,DS
CUCURBITACEAE	*Marah macrocarpus*	Wild cucumber	SMC,DS
CUSCUTACEAE	*Cuscuta californica*	Witch's hair	SMC
FABACEAE	*Lotus scoparius*	Deerweed	SMC, SAWRF
	Lupinus sp.	Lupine	SMC
	Lupinus truncates	Collar lupine	SMC
	Trifolium sp.	Yellow clover	DS,SAWRF
FAGACEAE	*Quercus agrifolia*	Coast live oak	DEOW
	Quercus berberidifolia	Scrub oak	SMC,SAWRF
	*Quercus engelmannii**	Engelmann Oak	DEOW
GERANIACEAE	*Erodium cicutarium♦*	Filaree	DS,SMC
HYDROPHYLLACEAE	*Emanthe penduliflora*	Whispering bells	SMC
	Phacelia cicutaria	Caterpillar phacelia	SMC
	Phacelia parryi	Parry's phacelia	SMC
LAMIACEAE	*Eriodictylon crassifolium*	Yerba santa	SMC
	Salvia apiana	White sage	SMC
	Salvia columbariae	Chia	SMC,DS
LILIACEAE	*Dichelostemma capitatum*	Blue dicks	SMC
	Calochortus concolor	Golden bowl mariposa	SMC,DS
	Calochortus weedii	Weed's mariposa	SMC
	Chlorogalum pomeridianum	Wavy-leaf soap-plant	SMC
MALVACEAE	*Malva parviflora ♦*	Cheeseweed	DS
NYCTAGINEACEAE	*Mirbailis californica*	Coastal wishbone plant	SMC
ONAGRACEAE	*Cammisonia bisorta*	California sun cup	SMC
	Cammisonia californica	False mustard	SMC
OXALIDACEAE	*Oxalis cernua♦*	Bermuda buttercup	DS

APPENDIX A
PLANT SPECIES OBSERVED ON THE CROCKER PROPERTY – TPM 20743

Family Name	Species Name♦	Common Name	Habitat
PAEONIACEAE	*Paeonia californica*	California peony	SMC
PAPAVERACEAE	*Dicentra chrysantha*	Golden eardrops	SMC
PINACEAE	*Pinus jeffreyi*	Jeffrey pine	DE
PLANTACEAE	*Platanus racemosa*	Sycamore	DEOW
POACEAE	*Avena* sp.♦	Wild oat	SMC, DS, SAWRF
POLEMONIACEAE	*Navarettia sp.*	Skunk weed	SMC
POLYGONACEAE	*Chorizanthe staticoides*	Turkish rugging	SMC
	Eriogonum fasciculatum	California buckwheat	SMC
	Pterostegia drymarioides	Granny's hairnet	SMC
RANUNCULACEAE	*Delphinium parryi*	Parry's larkspur	SMC
	Delphinium patens	Larkspur	SMC
RHAMNACEAE	*Ceanothus tomentosus*	Ramona lilac	SMC
	Rhamnus crocea	Spiny redberry	SMC
ROSACEAE	*Adenostoma fasciculatum*	Chamise	SMC
	Cercocarpus minutiflorus	San Diego mountain mahogany	SMC
	Cercocarpus sp.	Mountain mahogany	SMC
	Prunus ilicifolia	Holly-leaved cherry	SMC[?]
SALICACEAE	*Salix lasiolepsis*	Arroyo willow	SAWRF
SELAGINELLACEAE	*Selaginella sp.*	Mossfern	SAWRF
SCROPHULARIACEAE	*Antirrhinum kelloggii*	Climbing snapdragon	SMC,SAWRF
	Antirrhinum nuttallianum	Nuttall's snapdragon	SMC
	Cordylanthus rigidis	Dark-tipped bird's beak	SMC
	Mimulus brevipes	Slope semiphore	SAWRF
	Mimulus aurantiacus	Coast monkey flower	SMC
SOLANACEAE	*Nicotiana glauca*	Tree tobacco	SAWRF
	Solanum sp.	Nightshade	DE
	Solanum xanti	Nightshade	SMC

DE = Developed
DS = Disturbed
DEOW = Dense Engelmann Oak Woodland
SAWRF = Southern Arroyo Willow Riparian Forest
SMC = Southern Mixed Chaparral

♦ = Non-native Plant Species
* = Sensitive Plant Species

APPENDIX B

WILDLIFE SPECIES OBSERVED

APPENDIX B

WILDLIFE SPECIES OBSERVED ON THE CROCKER PROPERTY - TPM 20743

Common Name	Scientific Name	Habitat Observed *	# Observed (estimate)
Insects			
Ant	**Family** *Formicidae*	SMC,DS,DE	Many
Cabbage white	*Artogeia rapae*	SMC,SAWRF	4
Fly	**Family** *Muscidae*	SMC,SAWRF,DS	Many
Funerial dusky-winged skipper	*Erynnis funeralis*	SAWRF	1
Grasshopper	**Family** *Acrididae*	SMC,DS	Many
Honey bee	*Apis mellifera*	DE,SMC	2
Tarantual hawk (wasp)	**Family** *Pompilidae(?)*	SMC	1
Termites	**Order** *Isoptera*	SMC	1 Set of tunnels
Wasp	**Order** *Hymenoptera*	SMC	1
Amphibians			None observed
Reptiles			
San Diego horned lizard *	*Phrynosoma coronatum*	DEOW	1
Western fence lizard	*Sceloporus occidentalis*	SMC	1
Birds			
Anna's hummingbird	*Calypte anna*	DE	1
Ash-throated flycatcher	*Myiarchus cinerascens*	SMC,SAWRF	2
Black-headed grosbeak	*Pheucticus melanocephalus*	DEOW	1 offsite
Bewick's wren	*Thryomanes bewickii*	DEOW	1
Bushtit	*Psaltriparus minimus*	DEOW	1
California towhee	*Pipilo crissalis*	DEOW,SMC	3
Common raven	*Corvus corax*	All	4
Costa's hummingbird	*Calypte costae*	DE,SMC	3
House finch	*Carpodacus mexicanus*	SCLORF	1 offsite
Lesser goldfinch	*Carduelis psaltria*	DS,DE,SMC,DEOW	7
Mourning dove	*Zenaida macroura*	DS	2
Northern flicker	*Colaptes auratus*	SCLORF	1 offsite
Pacific slope flycatcher	*Empidonax difficilis*	DEOW	1
Red-tailed hawk	*Buteo jamaicensis*	All	5 (family)
Rough-winged swallow	*Stelgidopteryx serripennis*	SAWRF	2
Rufous-sided towhee	*Pipilo erythrophthalmus*	DEOW	2
Scrub jay	*Aphelocoma californica*	DE,SMC,SAWRF	1
Wrentit	*Chamaea fasciata*	SMC	1
Turkey vulture *	*Cathartes aura*	All	1
Mammals			
Bobcat	*Lynx rufus*	DS,SMC,DEOW	Tracks, 1 set
California ground squirrel	*Spermophilus beecheyi nudipes*	SMC	1 heard, many tracks
Coyote	*Canis latrans*	DS,SMC	Tracks, 1 set
Desert cottontail rabbit	*Sylvalagus audubonii*	SMC	3
Gray fox	*Urocyon cinereoargenteus*	SCLORF	1 offsite
Mouse	*Chaetodipus sp. or Peromyscus sp.*	DS,SMC	Many tracks
Pocket gopher	*Thomomys bottae*	SMC	Many
Raccoon	*Procyon lotor*	DS,SMC,DEOW	Tracks, 2 sets
Skunk	*Mephitis sp.*	DS,DEOW	Tracks, I set
Woodrat	*Neotoma sp.*	DE	1 Nest w/thistle spines

DE = DEVELOPED, DS=DISTURBED, DE=DEVELOPED, DEOW=DENSE ENGELMANN OAK WOODLAND, SAWRF=SOUTHERN ARROYO WILLOW RIPARIAN FOREST, SMC= SOUTHERN MIXED CHAPARRAL

*= Sensitvie Species

APPENDIX C

SENSITIVE PLANT SPECIES WITH THE POTENTIAL TO OCCUR

APPENDIX C

SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Species	Growth form/Bloom Period	CNPS	R-E-D	State	Federal	Potential to Occur Onsite
ACANTHOMINTHA ILICIFOLIA "San Diego thorn-mint"	Annual herb April - June	1B	2-3-2	CE	FT	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
ARCTOSTAPHYLOS OTAYENSIS *Otay Manzanita*	Shrub January - March	1B	3-2-3	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
ASTRAGALUS DEANEI "Dean's milk-vetch"	Perennial herb February - May	1B	3-3-3	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
ASTRAGALUS OOCARPUS "San Diego milk vetch"	Perrenial herb February - May	1B	3-2-3	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
BACCHARIS VANESSE "Encinitas baccharis	Shrub (deciduous) August - November	1B	2-3-3	CE	FT	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
BRODIAEA ORCUTTII "Orcutt's brodiaea"	Perennial herb (bulbiferous) May - July	1B	1-3-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CALOCHORTUS DUNNII "Dunn's mariposa lily"	Perennial herb (bulbiferous) April - June	1B	2-2-2	CR	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CEANOTHUS CYANEUS "Lakeside ceanothus"	Shrub (evergreen) April - June	1B	3-2-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CHAMAEBATIA AUSTRALIS "southern mountain misery"	Shrub (evergreen) November - May	4	1-2-1	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CHORIZANTHE LEPTOTHECA "Peninsular spineflower"	Annual herb May - August	4	1-2-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CHORIZANTHE POLYGONOIDES VAR. LONGISPINA "long-spined spineflower"	Annual herb April - July	1B	2-2-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
CLARKIA DELICATA "delicate clarkia"	Annual herb April - June	1B	2-2-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
COMAROSTAPHYLIS DIVERSIFOLIA SSP. DIVERSIFOLIA "summer holly"	Shrub (evergreen) April - June	1B	2-2-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
DUDLEYA VARIEGATA "variegated dudleya"	Perennial herb May - June	1B	2-2-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
GILIA CARUFOLIA *"caraway-leaved gilia"*	Annual herb May - August	4	1-1-1	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
GITHOPSIS DIFFUSA SSP. FILICAULIS "Mission Canyon bluecup"	Annual herb April - June	3	?-3-3	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.

APPENDIX C

SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Species	Growth form/Bloom Period	CNPS	R-E-D	State	Federal	Potential to Occur Onsite
HARPOGONELLA PALMERI "Palmer's grapplinghook"	Annual herb March - May	4	1-2-1	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
HORKELIA TRUNCATA "Ramona horkelia"	Perennial herb May - June	1B	3-1-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
LATHYRUS SPLENDENS "pride-of-California"	Perennial herb March - June	4	1-1-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
LEPECHINIA GANDERI "Gander's pitcher sage"	Shrub June - July	1B	3-1-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
LOTUS CRASSIFOLIUS VAR. OTAYENSIS "Otay Mountain lotus"	Perennial herb May - August	1B	3-3-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
MONARDELLA HYPOLEUCA SSP. LANATA "felt-leaved monardella"	Perennial herb (rhizomatous) June - August	1B	2-2-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
MUILLA CLEVELANDII "San Diego goldenstar"	Perrenial herb May	1B	2-3-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
MYOSURUS MINIMUS SSP. APUS "little mousetail"	Annual herb March - June	3	2-3-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during
NOLINA INTERRATA "Dehesa nolina"	Perennial herb June - July	1B	3-3-2	CE	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
PIPERIA COOPERI "chaparral rein orchid"	Perennial herb March - June	4	1-2-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
PIPERIA LEPTOPETALA "narrow-petaled rein orchid"	Perennial herb May - July	4	1-1-3	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
POLYGALA CORNUTA VAR. FISHIAE "Fish's milkwort"	Shrub (deciduous) May - August	4	1-1-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
QUERCUS CEDROSENSIS "Cedros Island oak"	Tree (evergreen) April - May	2	3-2-1	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
RIBES CANTHARIFORME "Moreno currant"	Shrub (deciduous) February - April	1B	3-1-3	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
SATUREJA CHANDLERI "San Miguel savory"	Perennial herb March - July	1B	2-2-2	None	None	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
SENECIO GANDERI "Gander's ragwort"	Perennial herb April - May	1B	3-2-3	CR	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.
TETRACOCCUS DIOICUS "Parry's tetracoccus"	Shrub (deciduous) April - May	1B	3-2-2	None	SOC	Low potential to occur onsite. Species was not observed and would have been detected during the survey season.

APPENDIX D

SENSITIVE WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
INSECTS				
Quino Checkerspot	Euphydryas editha quino	FE/SOC	Open shrub habitats, primary host plant is *Plantago erecta*	Low potential to occur onsite. Pre-burn habitat not open; far from known
Hermes copper	*Lycaena hermes*	SOC/CSC	Coastal sage scrub, mixed chaparral and chamise chaparral; 0-3000ft.	Low potential to occur onsite. Habitat disturbed by burn.
AMPHIBIANS				
Arroyo southwestern toad	*Bufo microscaphus californicus*	FE/CSC	Semi-arid regions near washes or intermittent streams. Habitats used include valley-foothill and desert riparian as well as a variety of more arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral and sagebrush; 500-3000ft. Nocturnal.	Low. Washes present, but dry, no shallow pools.
Western spadefoot toad	*Scaphiopus hammondii*	SOC/CSC	Grassland situations can occasionally occur in valley-foothill hardwood woodlands. Populations may persist a few years in orchard-vineyard habitats; 0-3000ft.	Moderate. Hardwood woodalnd present.
REPTILES				
Coastal rosy boa	*Charina trivirgata roseofusca*	SOC/CSC	Coastal sage scrub, mixed chaparral, oak woodlands and chamise chaparral. Often found in association with rock outcrops; 0-3000ft.	High. Approporaite habitat, and known to occur in area.
Coastal western whiptail	*Cnemidophorus tigris multiscutatus*	SOC/CSC	Mixed chaparral, riparian, oak woodlands and chamise chaparral. Prefers rocky firm soils but avoids dense grasslands and wet areas; 0-3000ft.	High. Appropriate habitat.
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SOC/CSC	Grass, chaparral, woodland, desert and coastal sage scrub. Found near rock outcrops with adjacent seasonal drainages; 0-3000ft.	High. Appropriate habitat.
Northern red diamond rattlesnake	*Crotalus ruber ruber*	SOC/CSC	Coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub; 0-3000ft.	High. Appropriate habitat.
Orange-throated whiptail	*Cnemidophorus hyperythrus*	SOC/CSC Protected	Can be found in coastal sage scrub, mixed chaparral, grassland, riparian, and chamise chaparral habitats. Open hillsides with brush and rock, well drained soils; 0-1000ft.	High. Appropriate habitat, and known to occur in area.
San Diego ringneck snake	*Diadophis punctatus similis*	--/CSC	Coastal sage scrub, mixed chaparral, riparian, oak woodlands, chamise chaparral, mixed conifer, closed cone forest. Can be found on surface during winter after rainfalls or during spring; 0 to over 3000ft.	High. Appropriate habitat exists onsite.

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Silvery legless lizard	*Anniella pulchra pulchra*	SOC/CSC	Coastal sage scrub, grassland, riparian and coastal desert dunes. Found in sandy loam and areas of accumulated leaf litter beneath shrubs and trees; 0 to 3000ft.	High. Appropriate habitat exists onsite.
MAMMALS				
American badger	*Taxidea taxus*	--/CSC	This species is most abundant in drier open stages of most shrub, forest, and herbaceous habitats; 0 to over 3000ft.	Low. No sign found.
Big free-tailed bat	*Nyctinomops macrotis*	--/CSC	This species is found in a variety of plant associations including desert scrub, various woodlands and coniferous forests. Is a colonial roosting species that is typically found in crevices of rugged cliffs and high, rocky outcrops; 0 to 3000ft.	Low. Appropriate foraging habitat but no roosting habitat. Not detected in Sweetwater watershed (USGS, 2004).
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	SOC/CSC	Occupies coastal sage scrub, mixed chaparral, oak woodland, chamise chaparral, and mixed conifer habitats; 0 to over 3000ft.	High. Appropriate habitat present and possible tracks found.
Fringed Myotis	*Myotis thysanodes*	FSC/CSC	This species may be found in a variety of plant communities including desert scrub, oak woodlands, and pinyon-juniper forests. It is a colonial species that prefers caves, mines and abandoned buildings for roost sites.	Low. Appropriate foraging habitat but no roosting habitat. Not detected in MSCP (USGS, 2004).
Greater western mastiff bat	*Eumops perotis californicus*	SOC/CSC	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting; 500-3000ft.	High. Appropriate habitat and detected in all watersheds in MSCP bat survey (USGS, 2004).
Long-eared myotis	*Myotis evotis*	FSC/--	They are found predominantly in coniferous forests, typically only at higher elevations in southern areas; between 7,000 and 8,500 feet.	Low. No appropriate habitat. Not detected in Sweetwater watershed (USGS, 2004).
Long-legged myotis	*Myotis volans*	FSC/--	Prefers forested mountainous areas, but can be found in a variety of areas down to desert lowlands. Regularly roosts in buildings but also will use hollow trees, loose bark and crevices in rock ledges; 0 to 3000ft.	Low. Marginal habitat. Not detected in MSCP bat survey (USGS, 2004).

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Los Angeles little pocket mouse	*Perognathus longimermbris brevinasus*	SOC/CSC	Los Angeles Pocket Mouse is restricted to lower elevation grasslands and Coastal Sage associations in the Los Angeles Basin; 0-1000ft.	Low. Marginal habitat.
Mountain Lion	*Felis concolor*	County Sensitive, CDFG protected	Species found in a variety of different habitats from desert to coast range forest; 0 to 10,000ft.	High. Property owners observed adjacent to site prior to burn.
Pallid bat	*Antrozous pallidus*	--/CSC	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub. Prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging; 0-6000ft.	Moderate. Appropriate habitat, but not detected in Sweetwater watershed (USGS, 2004).
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	--/CSC	This species if found in a variety of plant associations including desert scrub, coastal scrub and pine oak woodlands. Is a colonial roosting species that is typically found in crevices of rugged cliffs and high, rocky outcrops; 0 to 3000ft.	Moderate. Foraging habitat, but no appropriate roostig habitat. Deteceted in Sweetwater watershed (USGS, 2004).
Ringtail	*Bassariscus astutus*	--/CSC	Nocturnal; found in mixed and chamise chaparral. Nests in rock recesses, hollow trees, logs, snags, abandoned burrow, or woodrat nests; 500 to over 3000ft.	High. Appropriate habitat present.
San Diego black-tailed jackrabbit	*Lepus californicus bennetti*	SOC/CSC	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, mixed conifer, and closed cone forest and open areas. Common in irrigated pastures and row crops; 0 to over 3000ft.	Low. No individuals or sign found. Cover reduced due to burn.
San Diego desert woodrat	*Neotoma lepida intermedia*	SOC/CSC	Nocturnal in Coastal sage scrub, oak woodlands and chamise chaparral and rocky outcrops. Typically associated with cacti; 500-3000ft.	Moderate. No cacti, but un-identified Neotoma sp. nest was found predominantly composed of thistle spines.
Small-footed myotis	*Myotis ciliolabrum*	FSC/--	Occurs in deserts, chaparral, riparian zones, and western coniferous forests. It is most common in elevations above the pinyon-juniper forest level. Roosts in crevices provided by natural features such as cliffs, rocky outcrops, caves, and trees; 500 to 3000ft.	Moderate. Elevation in the low range. Species was detected in Seetwater watershed (USGS, 2004)

APPENDIX D
SENSITIVE ANIMAL SPECIES WITH THE POTENTIAL TO OCCUR WITHIN OR ADJACENT TO THE CROCKER PROPERTY - TPM 20743

Common Name	Scientific name	Federal/ State Status	Habitat	Potential On-Site
Southern grasshopper mouse	*Onychomys torridus ramona*	SOC/CSC	Nocturnal in coastal sage scrub, mixed chaparral, grassland, and chamise chaparral. Low to moderate shrub cover is preferred; 500-3000ft.	High. Appropriate habitat present.
Southern mule deer	*Odocoileus hemionus*	County Sensitive	The mule dear is extremely adapatabe occupying all but two or three of the major vegetation types in the western United States.	High. Appropriate habitat present and known to occur in the area.
Townsend's western big-eared bat	*Corynorhinus townsendii*	SOC/CSC	Found in all but subalpine and alpine habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for night, day, hibernation or maternity roosts; 500-3000ft.	Low. Foraging habitat but no appropriate roosting habitat onsite. Detected in Sweetwater watershed (USGS, 2004).
Yuma myotis	*Myotis yumanensis*	SOC/CSC	Mixed chaparral, riparian, oak woodland and pinon juniper. Optimal habitats are open forests and woodlands with sources of water over which to feed; 0-1000ft.	Moderate. Habitat appropritae, except lacks open water. Detected in all watersheds in MSCP bat survey (USGS, 2004).
BIRDS				
Rufous-crowned sparrow	*Aimophila ruficeps canescens*	*SOC/None*	Breeds and feeds on steep, dry, herbage-covered hillsides with scattered shrubs and rock outcrops.	Low. Slopes not steep and dry. Habitat disturbed by burn.
Bell's sage sparrow	*Amphispiza belli belli*	SOC/CSC	Coastal sage scrub, mixed and chamise chaparral. Nests well hidden in sagebrush or other scrub; 0-3000ft.	Low. Habitat disturbed by burn.
Cooper's hawk	*Accipiter cooperi*	--/CSC	Riparian and oak woodlands, eucalyptus groves and other forested areas; 500-3000ft.	High. Appropriate habitat present, especially oak woodalnd and riparian forest.
California gnatcatcher	*Polioptila californica*	FT/CSC	Most numerous in low, dense coastal sage scrub habitat of coastal hills.	Low. No appropriate habitat present.
Golden eagle	*Aquila chrysaetos candensis*	--/CSC Fully protected	Mountains, foothills, and adjacent grassland, open areas and canyons; 0-3000ft. (nesting/wintering)	High. Appropriate habitat onsite. Recorded in vicinity in San Diego Bird Atlas.
Sharp-shinned hawk	*Accipiter straiatus*	--/CSC	Open woodands and residentail, larger trees for nesting.	High. Apprpriate habitat onsite.

* = Appendix E – Sensitivity Codes

APPENDIX E

SENSITIVITY CODES

APPENDIX E
SENSITIVITY CODES

FEDERAL SPECIES DESIGNATIONS (USFWS 2001)

Category	
FE	Federal Endangered species
FT	Federal Threatened species
FPE	Taxa proposed to be listed as Endangered.
FPT	Taxa proposed to be listed as Threatened.
SOC	Species of Concern (former Candidate Species)

STATE SPECIES DESIGNATIONS (CDFG 2000)

Category	
SE	State listed as Endangered.
ST	State listed as Threatened.
SR	State-listed Rare
SCE	State candidate for listing as Endangered.
SCT	State candidate for listing as Threatened.
CSC	CDFG "Species of Special Concern".

CALIFORNIA NATIVE PLANT SOCIETY DESIGNATIONS (CNPS 2001)

The CNPS Lists

List 1 Plants of highest priority.
- 1A Plants presumed extinct in California.
- 1B Plants rare, threatened or endangered in California and elsewhere.

List 2 Plants rare, threatened or endangered in California, but more common elsewhere.

List 3 Plants about which we need more information. (A Review List)

List 4 Plants of limited distribution (A Watch List).

The R-E-D Code

R (Rarity)
- 1 Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time.
- 2 Distributed in a limited number of occurrences, occasionally more if each occurrence is small.
- 3 Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported.

E (Endangerment)
- 1 Not endangered.
- 2 Endangered in a portion of its range.
- 3 Endangered throughout its range.

D (Distribution)
- 1 More or less widespread outside California.
- 2 Rare outside California.
- 3 Endemic to California.